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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/777,955	02/12/2004	Grady M. Wood	125.025US02	7084

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EXAMINER	
TRAN, CHUC	

ART UNIT	PAPER NUMBER
2821	

DATE MAILED: 06/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/777,955	WOOD, GRADY M.	
	Examiner	Art Unit	
	Chuc D. Tran	2821	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *28 March 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-40* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-20 and 22-40* is/are rejected.

7)☒ Claim(s) *21* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☒ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Allowable Subject Matter

1. The indicated allowability of claims 3-17, 26 and 33-35 are withdrawn in view of the newly discovered reference(s) to Andersson (USP. 6,157,138). Rejections based on the newly cited reference(s) follow.

Response to Arguments

2. Applicant's arguments filed 3/28/05 have been fully considered but they are not persuasive.

Applicant argues that the patent by Andersson does not teach or suggest "pumping the energy stored on the first electrode to a positive terminal of the power supply during a discharging circle" in claim 1. The Examiner respectfully disagree. The patent by Andersson clearly teach pumping the energy stored on the first electrode to a positive terminal of the power supply during a discharging circle See (Col. 5, Line 62). Applicant also argues that the Andersson reference does not teach "returning stored energy stored on the EL-lamp to the power supply during a discharge cycle via inductive pumping". The patent by Andersson clearly teach returning stored energy stored on the EL-lamp to the power supply during a discharge cycle See (Col. 5, Line 62) via inductive pumping (34) (Col. 5, Line 36) (Fig. 3).

Claim Objections

3. Claims 3, 9 and 37 are objected to because of the following informalities:

Claim 3, line 2, "a" (cycle) change to - - the - -;

Claim 9, line 4, "a" (positive terminal) change to - - the - -;

Claim 37, line 1, "further comprising" change to - - wherein - -.

4. Appropriate correction is required.

Claim Rejections - 35 USC § 102

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-20 and 22-40 are rejected under 35 U.S.C. 102(b) as being anticipated by Andersson (USP. 6,157,138).

Regarding claim 1, Andersson disclose a method of operating an EL-lamp circuit, the method comprising:

- storing energy on a first electrode of a EL-lamp with a power supply during a charging cycle (Col. 5, Line 35); and

- pumping the energy stored on the first electrode to a positive terminal of the power supply during a discharging cycle (Col. 5, Line 62) (Abstract).

Regarding claim 2, Andersson disclose that cycling on and off a discharge current path that couples the first electrode to ground (Col. 1, Line 45); and

- when the discharge current path is cycled on, conducting current from the fast electrode to the positive terminal of the power supply (Col. 2, Line 64); and

- when the discharge runt path is cycled off continuing to conduct current to the positive terminal of the power supply via a discharging inductor (Col. 4, Line 8) (See Table I).

Regarding claim 3, Andersson disclose that the discharge current path is off longer than it is on during a cycle (See Table I).

Regarding claim 4, Andersson disclose that storing energy on a second electrode of the power supply (Abstract); and .

- pumping the energy stored on the second electrode to the positive terminal of the supply (Abstract).

Regarding claim 5, Andersson disclose that cycling on and offer discharge current path that couples the second electrode to ground (Col. 1, Line 45); and

- when the discharge current path is cycled on, conducting current from the second electrode to the positive terminal of the power supply with the use of an inductor (Col. 4, Line 55); and

- when the discharZe current path is cycled off, conducting current to the positive terminal of the battery via the inductor (Col. 4, Line 9).

Regarding claim 6, Andersson disclose a method of operating a cycle of an EL-lamp driver circuit; the method comprising:

- placing a select amount of positive charge on a first electrode of a load with a power supply with the use of a changing inductor (Col. 5, Line 35);

- discharging the positive charge on the first electrode to a positive terminal of the power supply with the use of a discharging inductor (Col. 5, Line 62).

- placing a select amount of positive charge on a second electrode of the load with the power supply with the use of the charging inductor (Col. 5, Line 65); and

- discharging the positive charge on the second electrode to the positive terminal of the power supply with the use of the discharging inductor (Col. 6, Line 4).

Regarding claim 7, Andersson disclose that cycling on and off a charging current path through [an] the charging inductor that is coupled between the positive terminal of the power supply and a negative terminal of the power supply (Col. 5, Line 58); and

- when the charging current path is off, coupling charge to the first electrode (Col. 5, Line 34).

Regarding claim 8, Andersson disclose that cycling on and off a charging currant path through the charring inductor that is coupled between the positive terminal of the power supply and a negative terminal of the power supply (See Table II); and

- when the charging current path is off coupling charge to the second electrode (Col. 6, Line 4).

Regarding claim 9, Andersson disclose that cycling on and off a discharge current path through [an] the discharging inductor that couples the first electrode to a positive terminal of the power supply (See Table II); and

when the discharge current path is cycled on, conducting current from the first electrode to the positive terminal of the power supply (Col. 5, Line 60).

Regarding claim 10, Andersson disclose that cycling on and offer discharge current path through the discharging inductor that couples the second electrode to ground (Col. 1, Line 45); and

- when the discharge current path is cycled on, conducting current froth the second electrode to the positive terminal of the power supply (Col. 6, Line 4).

Regarding claim 11, Andersson disclose that placing a select amount of positive charge on a first electrode of a load with a power supply (Col. 2, Line 64);

- discharging the positive charge on the frost electrode to a positive terminal of the power supply (Col. 4, Line 30);

- placing a select amount of negative charge on the first electrode of the load with the

power supply (Col. 4, Line 10); and

- discharging the negative charge on the first electrode (Col. 4, Line 55).

Regarding claim 12, Andersson disclose that turning on a first current path between the positive terminal of the power supply and a first side of an inductor (Col. 3, Line 44); and

cycling on and off a second current path between a second side of the inductor and ground (Col. 3, Line 58).

Regarding claim 13, Andersson disclose that the first current path is turned on by a first transistor (SW 11) and the second current path is cycled on and off by a second transistor (SW14) (Fig. 1).

Regarding claim 14, Andersson disclose that cycling on and off a third current path between the first electrode and the positive terminal of the power supply (Col. 4, Line 37).

Regarding claim 15, Andersson disclose that the third current path is cycled on and off by a transistor (Col. 4, Line 35).

Regarding claim 16, Andersson disclose that turning on a second current path between a second side of an inductor and ground (Col. 4, Line 41); and

cycling on and off a first currant path between the positive terminal of the power supply and a first side of the inductor (Col. 4, Line 40).

Regarding claim 17, Andersson disclose that the second path is turned on by a second transistor and the first current path is cycled on and off by a first transistor (Col. 4, Line 7).

Regarding claim 18, Andersson disclose a method of operating an EL-lamp circuit, the method comprising:

- storing energy from a power supply on an EL-lamp during a charging cycle

(Andersson, Col. 2, Line 1); and

- returning energy stored on the FL-lamp to the power supply during a discharge cycle (Andersson, Col. 5, Line 62).

Regarding claim 19, Andersson disclose that cycling a first transistor in response to a first digital signal (Andersson, Col. 3, Line 8).

Regarding claim 20, Adersson disclose that inductively pumping energy to the EL-lamp in response to the cycling of the first transistor (Andersson, Col. 3, Line 59).

Regarding claim 22, Andersson disclose that selectively creating a charging path to the EL-lamp (Col. 3, Line 9).

Regarding claim 23, Andersson disclose that selectively creating a charging path further comprises: selectively activating one or more switches (Col. 3, Line 43).

Regarding claim 24, Andersson disclose that selectively providing a discharge path to the power supply during the discharge cycle (Col. 4, Line 19).

Regarding claim 25, Andersson disclose that selectively switching one or more switches (Col. 4, Line 17).

Regarding claim 26, Andersson disclose that the discharge cycle is every half cycle (See Table II).

Regarding claim 27, Andersson disclose that cycling a second discharge transistor in response to a second digital signal (Col. 4, Line 15).

Regarding claim 28, Adersson disclose that inductively pumping energy stored on the EL lamp back to the power supply in response to the cycling of the second transistor (Col. 4, Line 9).

Regarding claim 29, Andersson disclose that selectively creating a discharge path to the power supply (Col. 4, Line 19)

Regarding claim 30, Andersson disclose that activating one or more switches (Col. 4, Line 18).

Regarding claim 31, Andersson disclose that providing a charging path to the EL lamp during the charging cycle (Col. 4, Line 12) (Col. 3, Line 2); and

- providing a discharging path to the power supply during the discharging cycle (Col. 4, Line 19) (Col. 3, Line 2).

Regarding claim 32, Andersson disclose that cycling a first transistor in response to a first digital signal during the charging cycle (Col. 3, Line 8); and

- cycling a second transistor in response to a second digital signal during the discharging cycle (Col. 4, Line 16).

Regarding claim 33, Andersson disclose that during an off period of the second digital signal, inductively conducting current from a negative terminal of the power supply to a positive terminal of the power supply (Col. 4, Line 11 & 15)

Regarding claim 34, Andersson disclose that the frequency of the first digital signal is different than the frequency of the second digital signal (Col. 3, Line 25).

Regarding claim 35, Andersson disclose that an on portion of a cycle of the second digital signal is shorter than an off portion of the cycle of the second digital signal (Fig. 1).

Regarding claim 36, Andersson disclose a method of operating an EL-lamp circuit, the method comprising:

- a selectively providing a charging path from a power supply to the EL-lamp during a

charging cycle (Col. 3, Line 5);

- cycling a first transistor in response to a first digital signal during the charging cycle (Col. 3, Line 10);

- storing energy from a power supply on an Fl.-lamp during the charging cycle (Col. 2, Line 63) (Col. 3, Line 64);

- selectively providing a discharging path form the El -lamp, to the power supply during a discharging cycle (Col. 2, Line 65) (Col. 4, Line 7);

- cycling a second transistor in response to a second digital signal during the discharging cycle (Col. 4, Line 15); and

- returning energy stored on the EL-hump to the power supply during the discharge cycle (Col. 4, Line 15).

Regarding claim 37, Andersson disclose that inductively pumping energy to the EI-lamp in response to the cycling of the first transistor (Col. 3, Line 25 and 59).

Regarding claim 38, Andersson disclose that inductively pumping energy stored on the El lamp back to the power supply in response to the cycling of the second transistor (Col. 4, Line 16) (Col. 3, Line 25).

Regarding claim 39, Andersson disclose that selectively activating one or more switches (Col. 3, Line 6).

Regarding claim 40, Andersson disclose that selectively activating one or more switches (Col. 3, line 6).

Allowable Subject Matter

6. Claim 21 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

7. The following is a statement of reasons for the indication of allowable subject matter:

Regarding claim 21, the references of the prior art of record fails to teach or suggest the combination of the limitation as set forth in the claim: the energy stored on the EL-lamp during a charging cycle is 1/2V2C.

Inquiry

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chuc D. Tran whose telephone number is (571) 272-1829. The examiner can normally be reached on M-F Flex hours.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Don Wong can be reached on (571) 272-1834. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

TC
June 13, 2005

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